



ELECTRONICS

Product Information

*SAMSUNG TFT-LCD***MODEL NO. : LTM213U3-L07****SAMSUNG ELECTRONICS CO. LTD.****Doc.No.****PI003****Page**

1 / 8

GENERAL DESCRIPTION

DESCRIPTION

LTM213U3-L07 is a color active matrix TFT (Thin Film Transistor) liquid crystal display (LCD) that uses amorphous silicon TFT as a switching devices. This model is composed of a TFT LCD panel, a driver circuit and a back-light system. The resolution of a 21.3" contains 1600 x 1200 pixels and can display up to 16.7 million colors with wide viewing angle of 80 degrees or higher in all directions. 6 O'clock direction is the Optimum viewing angle.

FEATURES

- High contrast ratio, high aperture structure
- APVA (Advanced Patterned Vertical Alignment) mode
- Wide viewing angle
- High speed response
- UXGA ((1600x1200) pixels) resolution
- Low power consumption
- Replaceable 6 CCFT (Cold Cathode Fluorescent Tube)
- DE (Data enable) only mode.
- Open LDI (DS90CF388)

APPLICATIONS

- Workstation & desktop monitors
- Display terminals for AV application products
- Monitors for Industrial machine



GENERAL INFORMATION

ITEM	SPECIFICATION	UNIT	NOTE
Display area	432(H) X 324(V) (21.3 inch diagonal)	mm	
Driver element	a-Si TFT active matrix		
Display colors	16.7M (true 8-bit)	colors	
Number of pixels	1600 x 1200	pixel	
Pixel arrangement	RGB vertical stripe		
Pixel pitch	0.27(H) x 0.27(W)	mm	
Display Mode	Normally Black		
Surface treatment	HAZE 25%, HARD-COATING (3H)		

Mechanical Information

ITEM		MIN.	TYP.	MAX.	NOTE
Module size	Horizontal (H)	-	483.0	-	mm
	Vertical (V)	-	373.2	-	mm
	Depth (D)	-	-	29.5	mm
Weight		-	-	4,500	g

INPUT Interface Connection

Connector : JAE FI-WE31P-HF

Mating Connector : JAE FI-WE31S-HF

387 NO	Tx Signal	JAE 31P No.	388 NO	Rx Signal	Remark
		31 (Reserved)		Reserved	Service Port
		30 (Reserved)		Reserved	Service Port
		29 (Reserved)		Reserved	Service Port
		28 (Reserved)		Reserved	Service Port
		27 (Reserved)		Reserved	Service Port
28	TxOut7+	26	79		Twisted Pair
29	TxOut7-	25	80		
		24 (GND)			Twisted Pair
		23 (GND)			
31	TxOut6+	22	82	RxOut6+	Twisted Pair
32	TxOut6-	21	83	RxOut6-	
33	TxOut5+	20	84	RxOut5+	Twisted Pair
34	TxOut5-	19	85	RxOut5-	
36	TxOut4+	18	86	RxOut4+	Twisted Pair
37	TxOut4-	17	87	RxOut4-	
		16(GND)			Twisted Pair
		15(GND)			
38	TxOut3+	14	89	RxOut3+	Twisted Pair
39	TxOut3-	13	90	RxOut3-	
41	TxOutCLK+	12	91	RxOutCLK+	Twisted Pair
42	TxOutCLK-	11	92	RxOutCLK-	
		10(GND)			Twisted Pair
		9(GND)			
44	TxOut2+	8	94	RxOut2+	Twisted Pair
45	TxOut2-	7	95	RxOut2-	
46	TxOut1+	6	96	RxOut1+	Twisted Pair
47	TxOut1-	5	97	RxOut1-	
49	TxOut0+	4	98	RxOut0+	Twisted Pair
50	TxOut0-	3	99	RxOut0-	
		2(GND)			Twisted Pair
		1(GND)			

BACK-LIGHT UNIT

The backlight system is an edge - lighting type with 6 CCFTs.

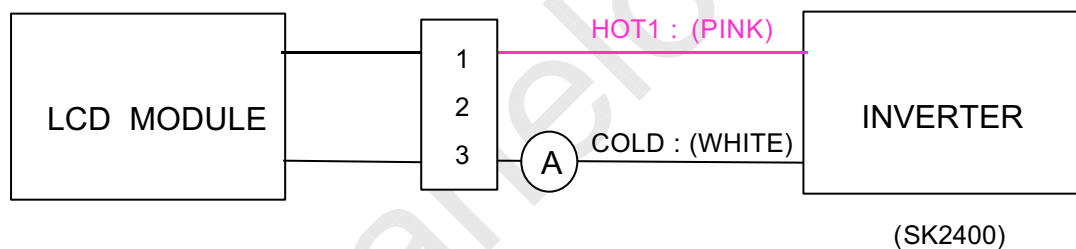
Ta = 25 ± 2 °C

ITEM	SYMBOL	MIN.	MAX.	UNIT	NOTE
Lamp Current	IL	6.2	6.8	mArms	(1)
Lamp frequency	FL	30	60	kHz	(1)

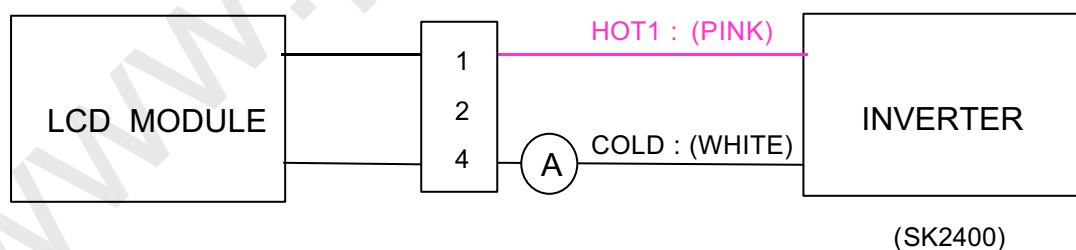
Note 1) Permanent damage to the device may occur if maximum values are exceeded

Functional operation should be restricted to the conditions described under normal operating condition

• side lamps



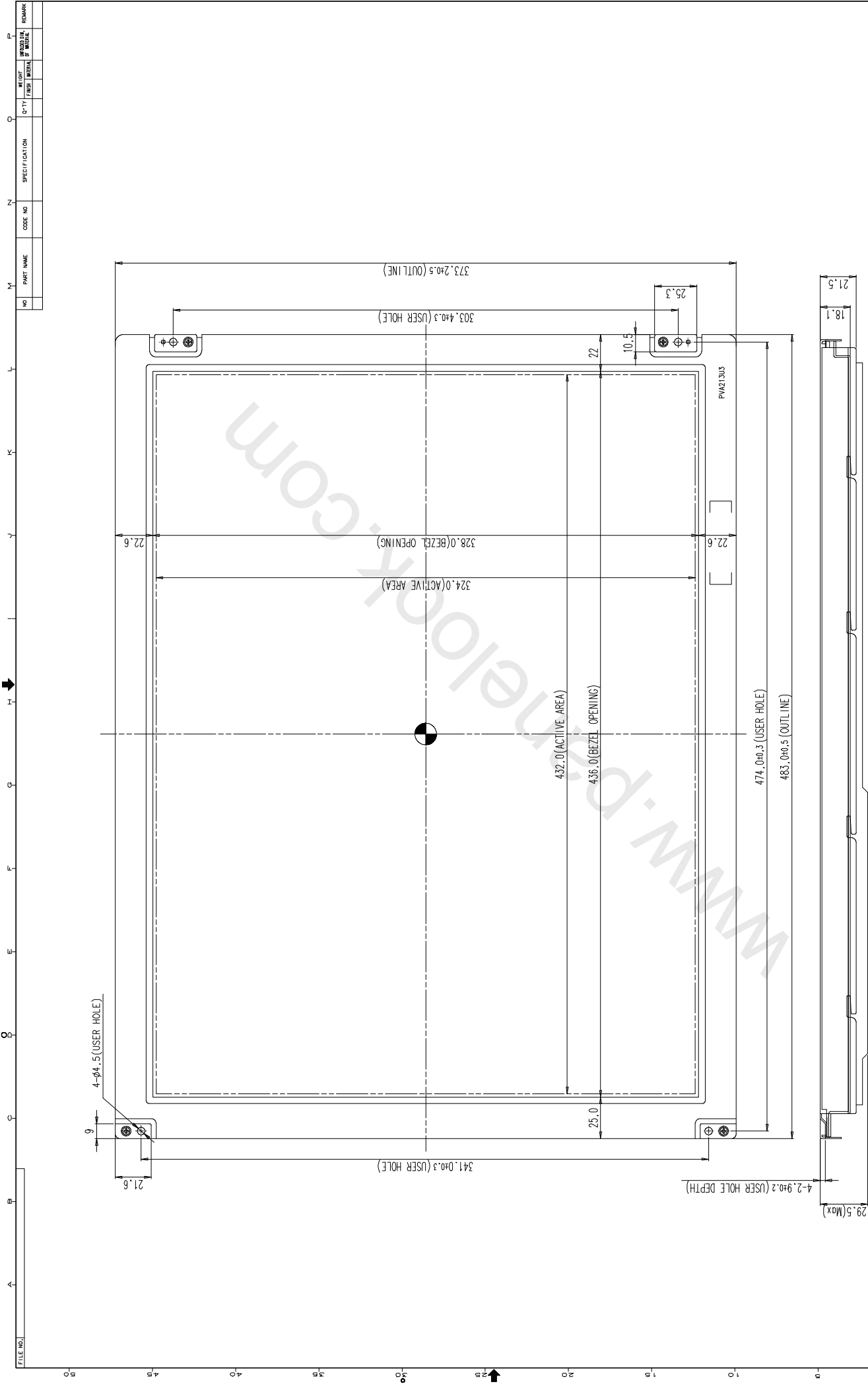
• center lamps



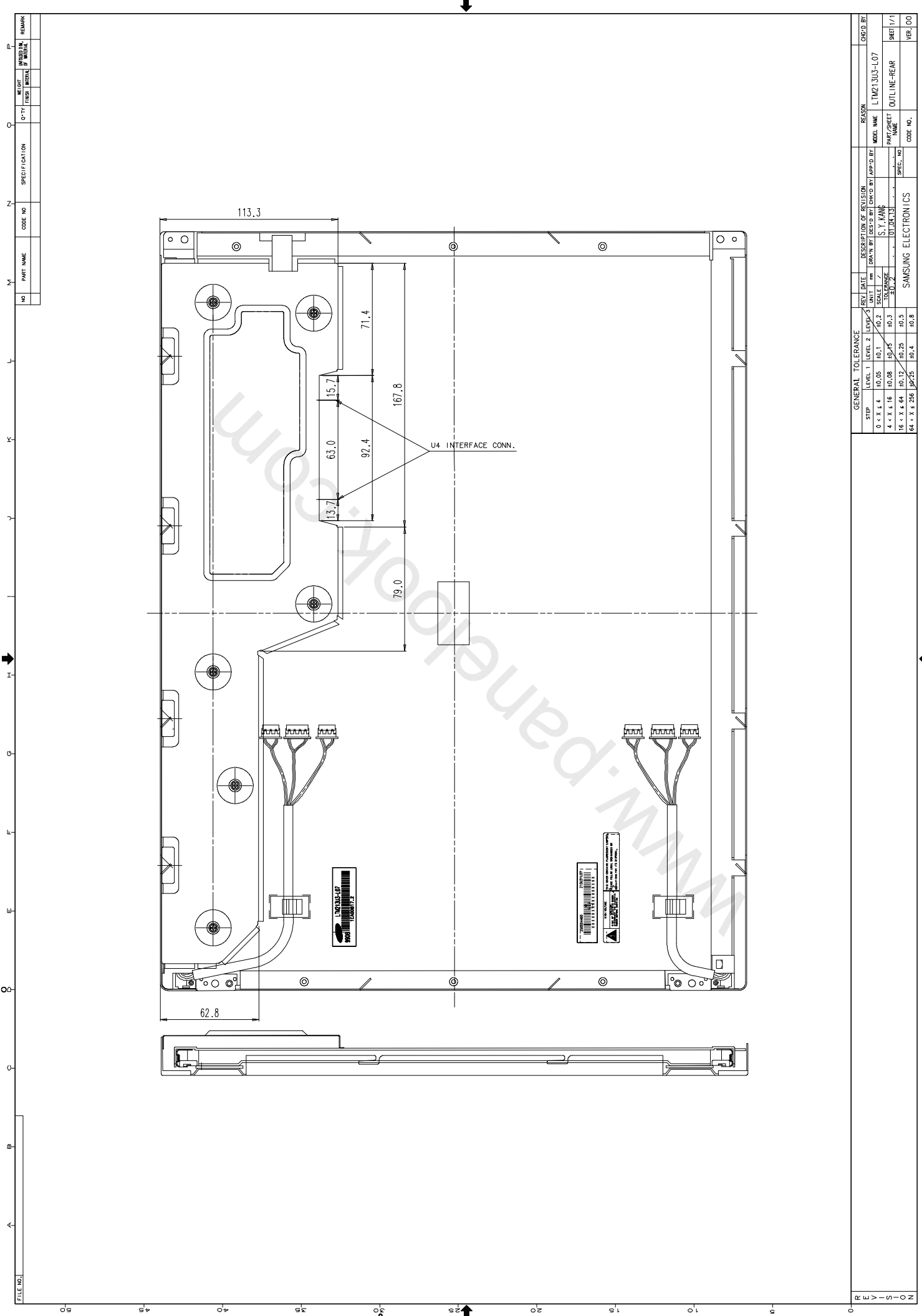
Connector : JST BHR - 03VS -1, JST BHR - 04VS -1

BACKLIGHT CONNECTOR PIN CONFIGURATION

Pin NO.	Input [ch1], [ch2]	Color	Function
3-1-1	HOT	Pink	High Voltage
3-1-2	N.C.	-	-
3-1-3	COLD	Black	Ground
3-2-1	HOT	Blue	High Voltage
3-2-2	N.C.	-	-
3-2-3	COLD	Yellow	Ground
3-3-1	HOT	White	High Voltage
3-3-2	N.C.	-	-
3-3-3			
3-3-4	COLD	White	Ground
4-1-1	HOT	Pink	High Voltage
4-1-2	N.C.	-	-
4-1-3	COLD	Black	Ground
4-2-1	HOT	Blue	High Voltage
4-2-2	N.C.	-	-
4-2-3	COLD	Yellow	Ground
4-3-1	HOT	White	High Voltage
4-3-2	N.C.	-	-
4-3-3			
4-3-4	COLD	White	Ground



REV	GENERAL TOLERANCE					REV. DATE	DESCRIPTION OF REVISION	DATE BY	DESIG BY	CHKD BY	APP'D BY	MODEL NAME	REASON	CHG'D BY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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GENERAL TOLERANCE		REV. DATE		DESCRIPTION OF REVISION		REASON		DATE	
STEP	LEVEL 1	LEVEL 2	LEVEL 3	DATE	DESCRIPTION	DATE	DESCRIPTION	DATE	DESCRIPTION
0 < X < 4	±0.05	±0.1	±0.2	SCALE	1:1	SCALE	1:1	SCALE	1:1
4 < X < 16	±0.08	±0.15	±0.3	TOLERANCE	±0.2	TOLERANCE	±0.2	TOLERANCE	±0.2
16 < X < 64	±0.12	±0.25	±0.5	±0.2	±0.2	±0.2	±0.2	±0.2	±0.2
64 < X < 256	±0.25	±0.4	±0.8	±0.2	±0.2	±0.2	±0.2	±0.2	±0.2

FILE NO.	REV. NO.	DATE	DESCRIPTION	REASON	DATE	DESCRIPTION	REASON	DATE	DESCRIPTION

MODEL NAME	L13M21303-L07	CODE NO.		DATE		DESCRIPTION		REASON	
PART/SHEET NAME	OUTLINE-REAR	CODE NO.		DATE		DESCRIPTION		REASON	
SHEET 1/1				DATE		DESCRIPTION		REASON	
VER. 00				DATE		DESCRIPTION		REASON	